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PATENT COOPERATION TREATY

PCT/JP2003/012789



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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 03213 (PCT)	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP2003/012789	International filing date (day/month/year) 06 October 2003 (06.10.2003)	Priority date (day/month/year) 10 October 2002 (10.10.2002)
International Patent Classification (IPC) or national classification and IPC H03F 1/56, 3/19		
Applicant NEC CORPORATION		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 4 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

 These annexes consist of a total of _____ sheets.

- This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 06 October 2003 (06.10.2003)	Date of completion of this report 05 July 2004 (05.07.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP2003/012789

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the claims:
 pages _____, as originally filed
 pages _____, as amended (together with any statement under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the drawings:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/JP 03/12789

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	7-12	YES
	Claims	1-6, 13-15	NO
Inventive step (IS)	Claims		YES
	Claims	1-15	NO
Industrial applicability (IA)	Claims	1-15	YES
	Claims		NO

2. Citations and explanations

Documents cited in the international search report:

Document 1: JP 5-62844 B2 (NEC Corp.), 9 September 1993

(Family: none)

Document 2: JP 10-84260 A (NEC Corp.), 31 March 1998

(Family: none)

Document 3: JP 5-48350 A (NEC Corp.), 26 February 1993

(Family: none)

Document 4: JP 2503913 B2 (NEC Corp.), 5 June 1996

(Family: none)

Document 5: JP 11-297936 A (Murata Mfg. Co., Ltd.), 29
October 1999 (Family: none)

Document 6: JP 11-220336 A (NEC Corp.), 10 August 1999,
& EP 0920122 A2, & CN 1219023 A,
& KR 99045609 A, & US 6313706 A,
& US 2001/0043121 A1, & US 2001/0052821 A1,
& US 2002/0005761 A1, & US 6388527 A,
& US 6476679 A, & US 6501335 A

Explanation:

Claims 1 to 6

The invention described in claims 1 to 6 lacks novelty and does not involve an inventive step in the light of document 1. Document 1 discloses a feature wherein the characteristic impedance of an interstage

circuit is set to be greater than the input or output characteristic impedances of an integrated circuit, and moreover, the output impedance (6a) and input impedance (9a) of a distributed amplifier (corresponding to the output and input impedances of an IC described in the present application) are set to be the same as the input and output impedances of the interstage circuit (60 Ω , for example); thus, it is deemed that an invention that is the same as the invention described in claims 1 to 6 is disclosed in document 1.

Claims 7 to 12

The invention described in claims 7 to 12 does not involve an inventive step in the light of documents 1 to 6. Documents 2 and 3 disclose an invention wherein an emitter-follower is used as the input part of a circuit and a differential circuit is used as the output part. Document 4 discloses the constituting of an ECL using a differential amplifier circuit. Document 5 discloses an invention of a constitution for a bare chip. Document 6 discloses an invention using coaxial cable together with semiconductor circuits.

Claims 13 to 15

Claims 13 to 15 lack novelty and do not involve an inventive step in the light of document 1. The specification set forth in claim 13 of frequencies for use as an input signal merely describes conventional frequencies. Further, the specifications set forth in claims 14 and 15 are simply design features.